

S.N. 09/887,676

1. (Currently amended) A method ~~for~~ of transmitting data packets (DAT) by way of a synchronous digital data transmission network (SDH) as defined by the International Telecommunications Union (ITU) in which the data packets (DAT) are packed into synchronous transport modules (STM-N), ~~characterized in that the~~ comprising the steps of using subunits (VC) of synchronous transport modules (STM-N) of the same size are ~~used~~ in order to establish logical virtual connections between network elements (NE1 - NE_n, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network (SDH), ~~that~~ entering the virtual connections (LV1-LV4) are ~~entered~~ into an address table (TAB),

~~that~~ in at least one part of the network elements (NE1 - NE_n, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network, ~~an evaluation of~~ evaluating the target address (ZAD) of the data packets (DAT) takes place and ~~that~~,

~~at least for a part of the data packets (DAT)~~ from at least one of the network elements of the synchronous digital data transmission network, on the basis of the address table (TAB) and the target address (ZAD), ~~a decision is made as to~~ deciding which one of the virtual connections (LV1 - LV4) ~~is used to use~~ to transmit this data packet.

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2. (Original) The method according to claim 1, in which the data packets (DAT) come from a local area network (LAN).

3. (Previously presented) The method according to claim 1, in which the data packets (LAN) are structured in accordance with the Internet Protocol.

4. (Previously presented) The method according to claim 1, in which

the target address (ZAD) is comprised of a network address (NAD) and a host address (HAD) and only the network address (NAD) is evaluated in intermediate network elements.

5. (Previously presented) The method according to claim 1, in which

a respective address table (TAB) is stored in each network element and is prepared by a central network management system (TMN-IP).

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6. (Currently Amended) A method ~~for of~~ transmitting data packets (DAT) by way of a synchronous digital data transmission network (SDH) as defined by the International Telecommunications Union (ITU) in which the data packets (DAT) are packed into synchronous transport modules (STM-N), ~~characterized in that the comprising the steps of~~ using subunits (VC) of synchronous transport modules

~~(STM-N) of the same size are used in order to establish logical virtual connections between network elements (NE1 - NE_n, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network (SDH), that entering the virtual connections (LV1-LV4) are entered into an address table (TAB),~~

~~that in at least one part of the network elements (NE1 - NE_n, MUX1, MUX2, CC1, CC2) of the synchronous digital data transmission network, an evaluation of evaluating the target address (ZAD) of the data packets (DAT), takes place and that~~

~~at least for a part of the data packets (DAT) from at least one of the network elements of the synchronous digital data transmission network, on the basis of the address table (TAB) and the target address (ZAD), a decision is made as to deciding which one of the virtual connections (LV1 - LV4) is used to use to transmit this data packet; and~~

~~wherein automatically preparing the address table (TAB) in is automatically prepared by a network element, by recording virtue of the fact that the target addresses (ZAD) and the source addresses of incoming and outgoing data packets (DAT) are recorded.~~

7. (Previously Presented) The method according to claim 6, in which a number of network elements synchronize their address tables (TAB) .

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8. (Currently Amended) The method according to claim 7, further comprising synchronizing in which the synchronization of the address tables (TAB) takes place via a service channel.

9. (Currently Amended) The method according to claim 1, further comprising re-establishing in which

the virtual connections (LV1 - LV4) ~~are re-established~~ at predetermined time intervals by using a central network management system (TMN-IP, TMN-SDH).

10. (Currently Amended) The method according to claim 1, in which further comprising establishing a new, fixed, logical connection is established at the instigation of a network element if the number of data packets to be transmitted which have the same target address or a group of neighboring target addresses, exceeds a threshold value.

11. (Currently Amended) The method according to claim 1, further comprising detecting in which sequences of data packets with the same source address and target address are detected and handled such packets the same.

12. (Currently Amended) The method according to claim 1, further comprising

using in which the a network element, disposed at a transfer point to the synchronous digital data transmission network, to makes a decision as to which one of the virtual connections is used to use to transmit a data packet.

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13. (Currently amended) A network element (NE) for a synchronous digital data transmission network (SDH) as defined by the International Telecommunications Union (ITU), comprising an interface (IN) by way of which the network element receives data packets with a target address, a memory (MEM) in which an address table (TAB) is stored, which table has entries regarding logical virtual connections between network elements of the synchronous digital data transmission network (SDH), means (IPADDR) for evaluating the target address of data packets, and means (SEL) for making a decision, on the basis of the target address and the address table, as to which one of the virtual connections is used to transmit a data packet.

14. (Previously Presented) The network element according to claim 13, wherein the element is a multiplexer (MUX; MUX1, MUX2) or concentrator.

15. (Previously Presented) The network element according to claim 13, wherein the element is a cross-connector (CC; CC1, CC2) and the means for evaluating the target address are provided for evaluating only a network address contained in the target address.

16. (Previously Presented) The network element according to claim 13, wherein the element is a compressor (COMP1, COMP2) and only repacks incoming subunits of synchronous transport modules into second, outgoing, smaller subunits of synchronous transport modules if the incoming subunits are not fully packed.